
MATLAB-JIRA Connection

"MATLAB-JIRA Connection" is a MATLAB utility to access Jira projects.

Developed by: Sysenso Systems, <https://sysenso.com/>

Contact: contactus@sysenso.com

Version: 1.0 - Initial Version.

Introduction

Jira is a proprietary software development tool developed by Atlassian that allows issue tracking and software project management. It is built for every member of the software team to plan, track, and release great software.

Apart from using Jira development environment, it provides REST API to build apps for Jira, develop integrations between Jira and other applications, or script interactions with Jira.

Reference: <https://developer.atlassian.com/server/jira/platform/jira-rest-api-examples/>

This "MATLAB-JIRA Connection" is an utility to developed in MATLAB to get Jira project and issue details using its APIs.

Authentication

The most important part to establish the MATLAB-JIRA Connection is Authentication. The preferred authentication methods for the Jira REST APIs are OAuth and HTTP basic authentication. This utility uses HTTP based basic authentication method for Jira connection which basically uses API tokens for enabling the login.

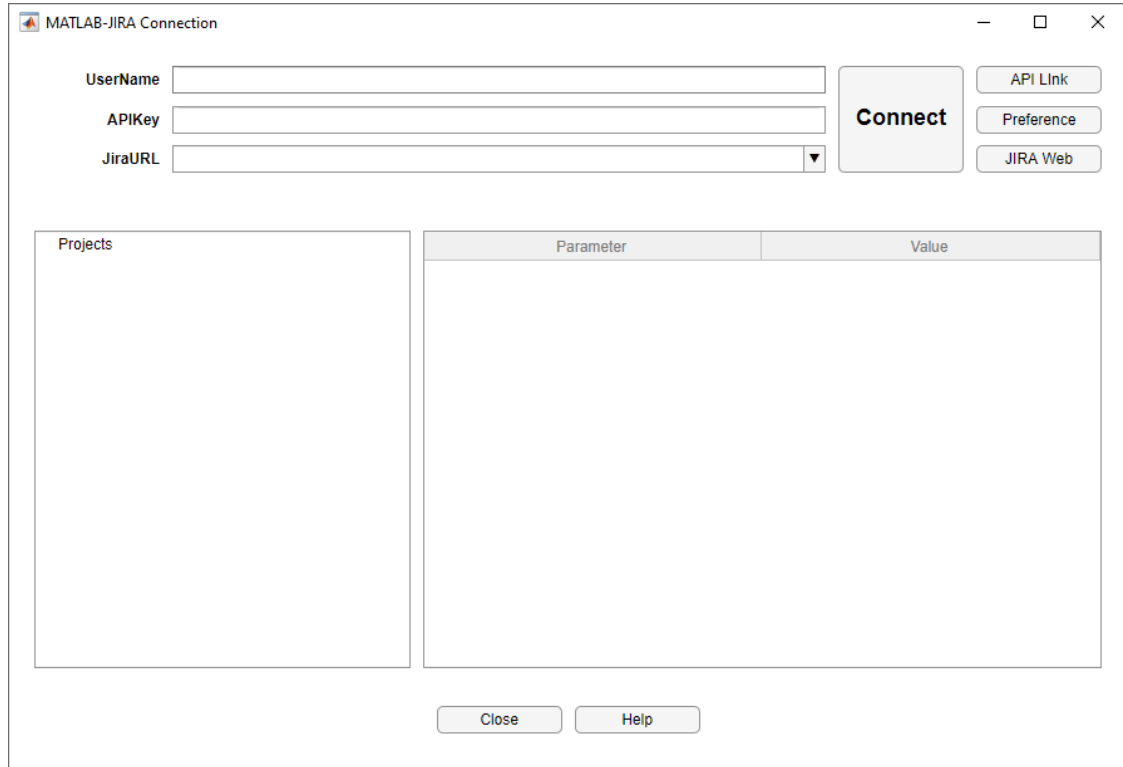
Jira users can generate an API token for their Atlassian account and use it to authenticate anywhere where they would have used a password. This enhances security because the users are not saving their primary account password outside of where they authenticate. They can quickly revoke individual API tokens on a per-use basis.

Reference: <https://developer.atlassian.com/server/jira/platform/basic-authentication/>

Launching the tool

Before launching the tool, add the JIRALink folder to the MATLAB path.

Then execute the command "JiraTool" in the MATLAB command window. to launch the tool.



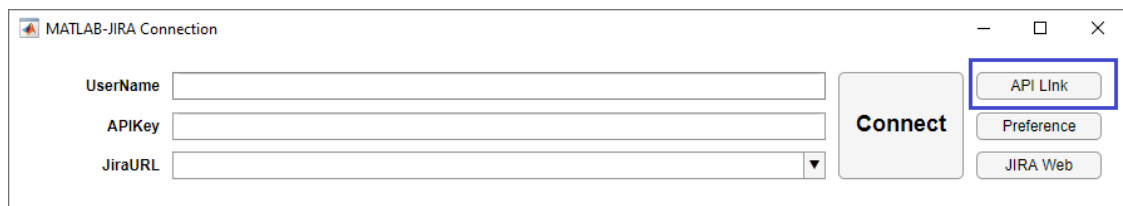
The MATLAB-JIRA Connection GUI is a window titled "MATLAB-JIRA Connection". It features three input fields on the left: "UserName", "APIKey", and "JiraURL" (with a dropdown arrow). To the right of these fields is a large "Connect" button. Further right are three smaller buttons: "API Link", "Preference", and "JIRA Web". Below the input fields is a table with two columns: "Projects" and "Parameter". The "Parameter" column is further divided into "Parameter" and "Value". At the bottom of the window are "Close" and "Help" buttons.

Creating the API Token

API token can be generated by following the information provided in the below link.


<https://confluence.atlassian.com/cloud/api-tokens-938839638.html>

Alternatively, press the API Link Button in MATLAB-JIRA Connection GUI to launch the security settings page for the Jira account. APITokenButton



This image shows the same MATLAB-JIRA Connection GUI as above, but with a blue rectangular box highlighting the "API Link" button in the top right corner.

Then select "Create and manage API tokens" under "API token".


Atlassian account

- Profile and visibility
- Email
- Security**
- Account preferences
- Connected apps
- Products

Security

Change your password

Current password

New password

Save changes

Two-step verification

Keep your account extra secure with a second login step. [Learn more](#)

[Manage two-step verification](#)

API token

A script or other process can use an API token to perform basic authentication with Jira Cloud applications or Confluence Cloud. You must use an API token if the Atlassian account you authenticate with has had two-step verification enabled. You should treat API tokens as securely as any other password. [Learn more](#)


Create and manage API tokens

Recent devices

If you've lost one of your devices or notice any suspicious activity, log out of all your devices and take steps to secure your account. [Learn more](#)

[View and manage recent devices](#)

From API Tokens pages, use "Create API Token" button to create new API token with a custom label.


Atlassian account

- Account settings
- Security settings
- Two-step verification
- API tokens**
- Recent devices

API Tokens

[Create API token](#) [Revoke all API tokens](#)

You must use an API token to perform basic authentication with Jira Cloud applications or Confluence Cloud. You'll also need to use an API Token if your account has two-step verification enabled. [Learn more](#) about API tokens.

Your API tokens need to be treated as securely as any other password. You can only create a maximum of 25 tokens at a time.

Label	Last accessed	Action
JIRATesting	Never Accessed	Revoke
TestToken	last month	Revoke

Copy the API key that is generated. This can be used to connect to the Jira account using APIs.

Your new API token

Make sure you copy your new API token. You won't be able to see this token again.



Close

Copy

Using the credentials

1. Enter the JIRA account username in the UserName editfield
2. Enter the Generated API token in the APIKEY editfield
3. Enter the JIRA Project URL link in the URL editfield
4. Press the Connect Button for making connection with JIRA

Accessing Projects

MATLAB-JIRA Connection shows the projects and issues in a tree view. Click the projects or issues in tree to show the details in a tabular form.

MATLAB-JIRA Connection

UserName:

APIKey:

JiraURL:

Connect

[API Link](#) [Preference](#) [JIRA Web](#)

Projects

- ▼ jiraRestAPI
 - issue1
 - issue2
 - issue3
- ▼ TestProjects
 - issue1
 - issue2
 - issue3
 - issue4
 - issue5
 - issue6

Parameter	Value
ProjectID	10001
Name	jira Rest API
ProjectTypeKey	software
Style	next-gen

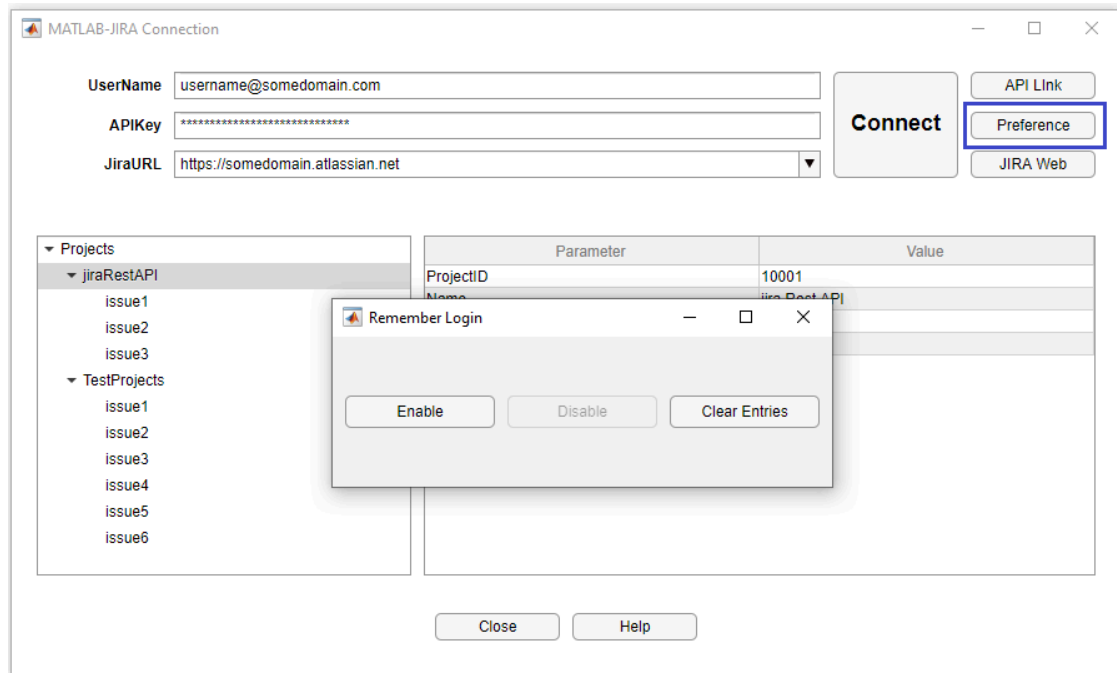
[Close](#) [Help](#)

Preference Settings

To get the user preference to Enable/Disable storing user credentials which helps the user avoid remembering the API tokens.

Click the preference button, it will show the three buttons.

1. Enable -> it enables the utility to store and retrieve credentials in a mat file.
2. Disable -> it disables the utility in recording the user credentials.
3. Clear entries -> it clears the existing credentials recorded.



Note: This tool is a prototype to study MATLAB-JIRA Connection capabilities. It has features only to fetch Jira project and issue details. It does not have support to update the Jira projects/issues. Please share your comments and contact us if you are interested in updating the features further.

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